Graupner

for Order no. **9399**

ASSEMBLY INSTRUCTIONS

SUPER DECATHLON

RC electric motor aircraft model for 3 LiPo cells with about 2500 mAh

A HoTT remote controller with 5 functions is needed

GRAUPNER GmbH & Co. KG D-73230 KIRCHHEIM/TECK GERMANY
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Please be sure to observe the safety instructions in the appendix of these assembly instructions. If the model is given to another person then the complete assembly instructions must be given along with the model as a reference.

General

The **SUPER DECATHLON** model is a particularly attractive semi-scale model equipped with many authentically replicated details. The model is extensively prefabricated. However, the assembly steps described below are to be carried out with great care in order to ensure the safe and successful implementation of the model. **Flying weight may not exceed 1700 g.**

RC accessories (not included)

MX-16 COMPUTERSYSTEM 2.4 GRAUPNER HoTT	Order no. 33116
Charger, ULTRAMAT 8	Order no. 6411
LiPo battery, 20C 3/2500 11.1 V G3.5	Order no. 7633.3
Charger cable, G3.5	Order no. 2970.L
Receiver battery (for position lights)	Order no. 2583
BEC adapter lead (for position lights)	Order no. 3029.10
Velcro ribbon	Order no. 3368.1
Float set	Order no. 9399.15

Necessary tools and adhesives (not included)

Fast setting glue	Order no.5821
Activator for fast setting glue	Order no. 953.150

Also needed: Phillips screwdriver, flat pliers, scissors, 1.5 mm Allen wrench, pulp-fiber paper, protective gloves, safety goggles

Assembly instructions

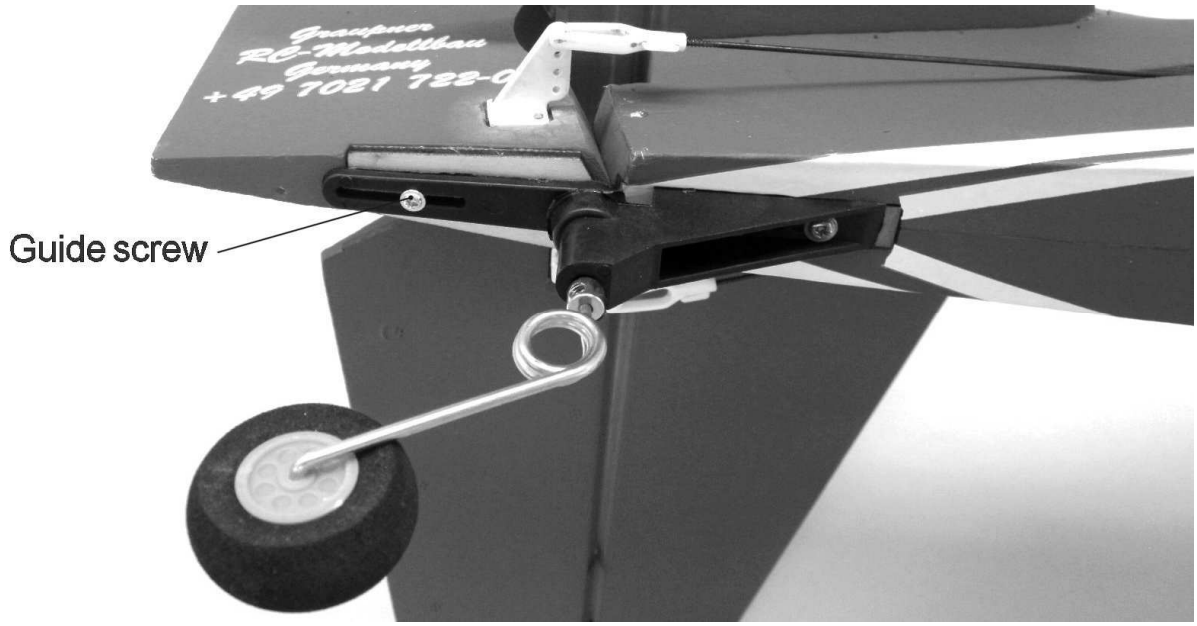
Please read the assembly instructions thoroughly before starting with assembly in order to gain an overview of the assembly process. For each assembly step, remove the parts needed from their transparent packages and gather the necessary tools and adhesives. Assembly work should always be done on a clean, flat surface or on a foam-rubber pad. When not otherwise specified, use fast setting glue with activator as an adhesive. The best technique is to coat one surface with glue and spray activator on the other surface. One should be particularly careful that no glue residue gets onto one's hands or on the model's exterior surfaces. Fast setting glue and activator spray dissolve paint on surfaces so do not use too much glue. If necessary, dab off excess glue right away with pulp-fiber paper.

Attention: Fast setting glue must never come into contact with human body parts or get into eyes. Because of this we recommend that safety goggles be worn when working with glue. Always store the glue out of the reach of children. For reasons of safety, use only the above named glue.

Fuselage with tail surfaces, tail-wheel coupling and main landing gear
Put the rudder and elevator servos into their neutral positions with a servo tester (order no. 764) or RC system. Now push on the tail assembly parts, initially without glue, to try out their fit. **Attention**; do not use activator spray to glue the tail assembly in place.

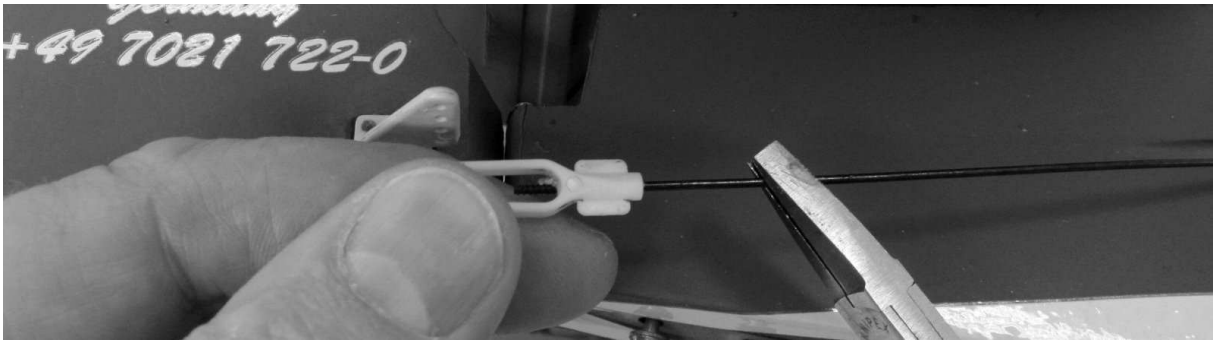
The elevator assembly can be glued on; when doing this be sure to also wet its contact surfaces in the fuselage with glue. Glue in the rudder assembly. **Attention**; after applying the glue, push the assembly in rapidly, otherwise the glue may stick to the parts before they are fully seated. In any case, do not use activator spray for this glue process.

Tail-wheel assembly



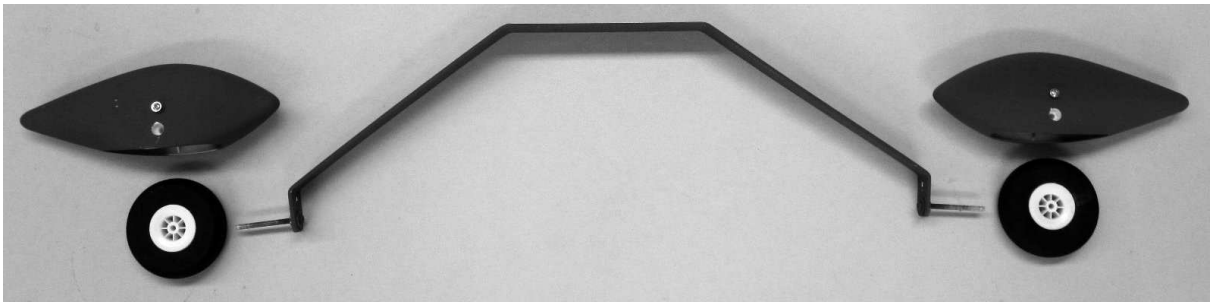
The figure shows the glued on tail assembly and screwed on tail wheel assembly. Do not screw down the guide screw tight as this would block the rudder.

Easily recognized on the figure, the rudder rod is hung into the outermost hole of the rudder arm. This setting is optimal for simple flight but if emphasis is to be put on agile aerobatic characteristics then hook the rod in one of the more inboard holes.



The figure shows the rudder coupling's length adjustment and how to hold the rod securely with flat pliers.

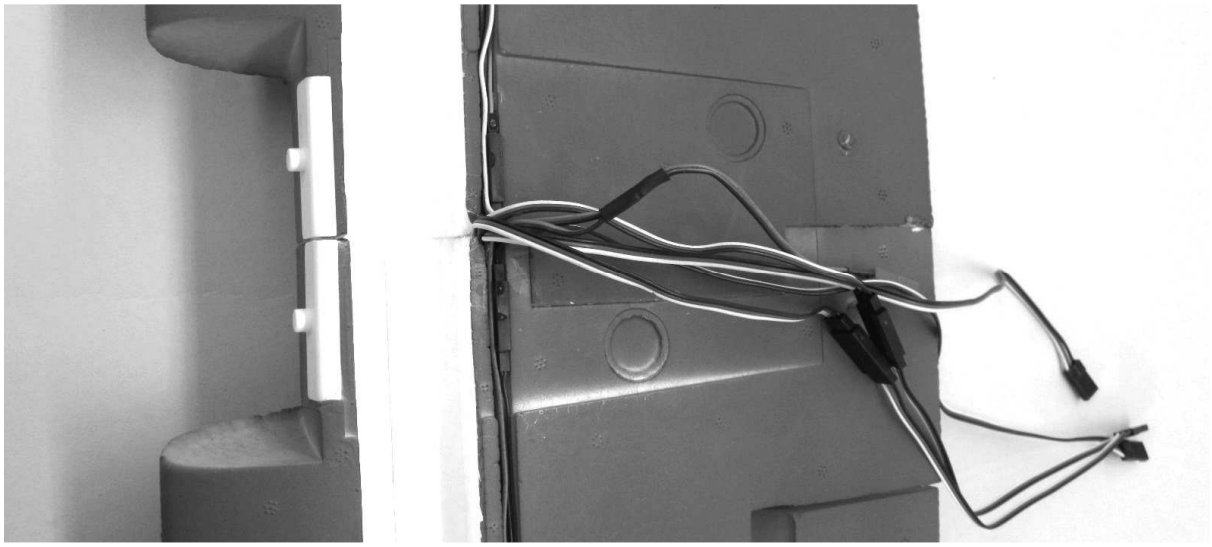
Main landing gear with wheel spats



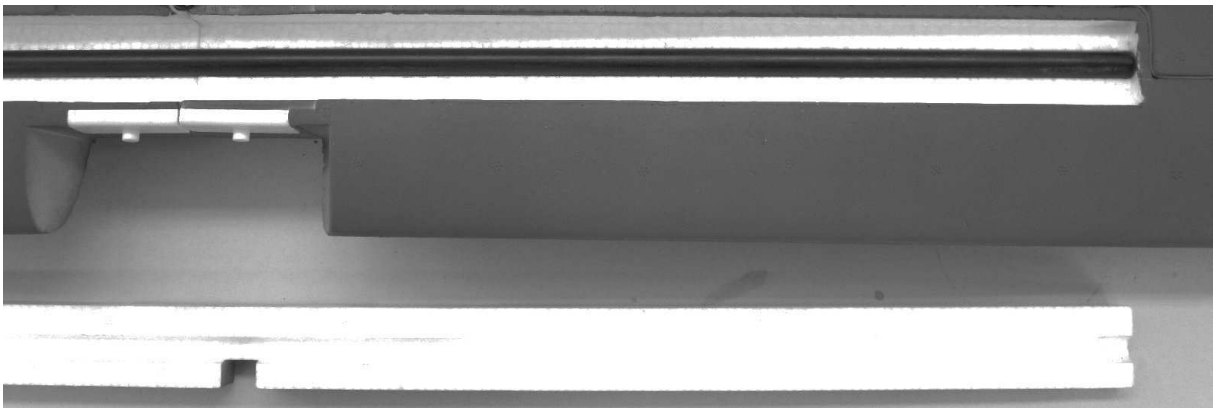
The figure shows the prepared parts of the main landing gear.
Remove the locking screw in the wheel spat then turn the wheel, together with the wheel spat, onto the wheel axle. When the wheel spat is turned in securely and the wheel still turns freely, fix the wheel spat in place on the landing gear bow with the locking screw.

The figure shows the assembled right wheel spat, the left wheel spat is assembled in the same manner. Now fasten the landing gear bow to the fuselage with the M4 x 25 mm long countersunk head screws. With this step, the fuselage assembly is already complete.

The wing



Make a "dry run" assembly (i.e. without glue) of both wing halves first. When gluing the wing halves, be sure everything is properly aligned then press them together tightly.



Glue in the CFRP wing spar then finish by gluing on the spar cover. Check the stability of the spar's glue bond with a stress test.

RC installation

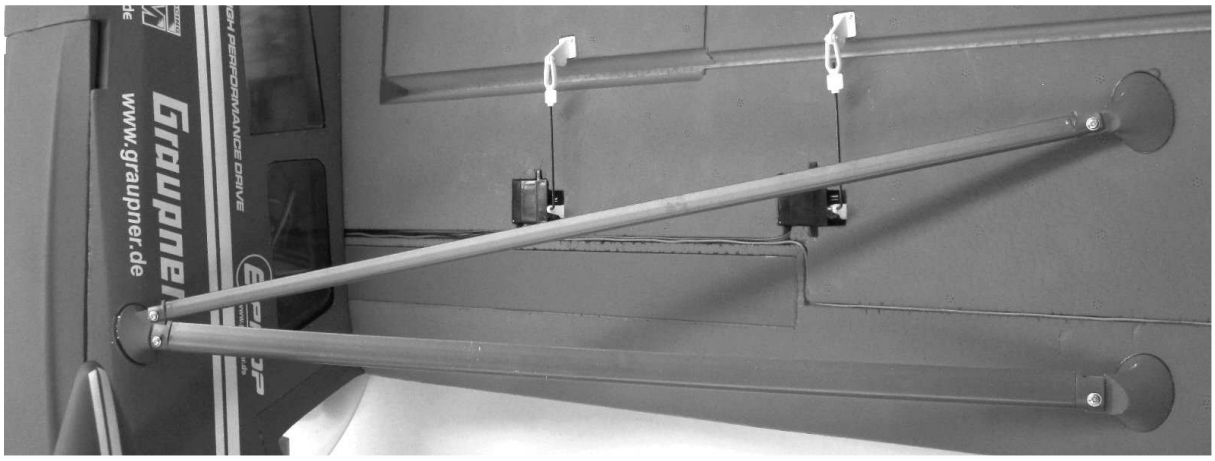
Position the HoTT receiver between the two seats in the model's cabin to ensure its fit there. Later on it will be fixed in place there with Velcro ribbon. For the time being, just lay the receiver loosely on the fuselage then plug the servos into the receiver so the wing's flap functions can be adjusted and tested. We recommend the following receiver socket layout: the speed controller in socket 1, the left aileron servo in socket 2, elevator servo in socket 3, rudder servo in socket 4, right aileron servo in socket 5 and the V-cable for the landing flaps in socket 6. **Attention:** When the G3.5

plug-in connection is made, as shown in the photo below, the receiver will be switched on. From this moment on, never touch the propeller and have a helper keep a good grip on the fuselage so that, if the motor should unexpectedly start, the propeller can turn freely without anything getting into its turning radius. Bind the receiver to the transmitter as described in the RC system's manual.

The figure shows the open battery compartment with installed battery and the G3.5 plug-in connector is connected. The battery is fixed in place with blocks of rigid foam.

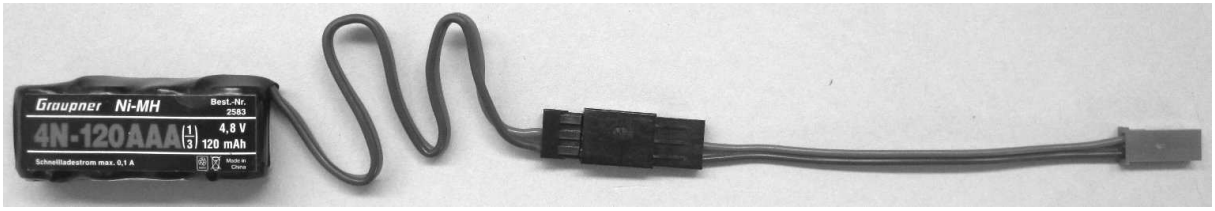
The wing struts

The model has been designed with wing struts, just like the aircraft it was modeled after. This gives the model a particularly attractive semi-scale appearance. The forward strut bears the main load and, because of this, has a larger diameter than the rear strut. The struts have a streamlined cross-section. Secure the struts with the screws provided. When this is done, be sure the pointed edges of the struts are oriented toward the rear of the model.



The figure shows the finished wing assembly with wing struts and the closed battery compartment.

The position lights
These have an operating voltage of 4.8 to 6.0 V and are already installed. We recommend their operation with a 4.8 V receiver battery connected with a BEC adapter cable. The battery can be fixed in the cabin with Velcro ribbon.



The rudder check
If necessary, change servo operating direction by using the Servo reverse menu. If the greatest possible throw for control surfaces is desired, attach the rods or cables to the innermost hole of the control surface's control arm. If the pilot has little flying experience, we recommend the rods always be attached in the outermost hole. Recommended maximum throw as measured on the given control surface edge: ailerons 20 mm each, landing flaps 25 mm, elevators 20 mm each, rudder 30 mm.

Balancing
Balancing is done when the model is in a flight-ready condition – except that the LiPo battery is disconnected. The model's center of gravity should be 60 to 65 mm behind the front edge of the wing. The battery should be pushed forward for this. The center of gravity point is tested by supporting the model with two fingers beneath the wings. The model should stop rocking back and forth at a horizontal attitude.

Flying
Perform trial flights of the finished model with neutral-adjusted control surfaces on a day with no wind or only a light breeze. A short-cut lawn which is smooth and in an open area is an optimal location for trial flights. **The model should take off from the ground in the direction exactly into the wind.** Once the model has lifted off, put it into a gentle, straight climb with minimum aileron and elevator corrections. Make the landing exactly into the wind at minimum motor speed. Reduce the model's landing approach speed by extending the landing flaps and doses of elevator throw.

GRAUPNER Modellbau wishes you many pleasant flights with this new flying model.

SUPER DECATHLON

Replacement parts (not included)

9399.5	landing gear bow
.7	motor cowl
.8	wheel spat pair
1326.12x6	propeller

Technical data

Scale	1:7
Wingspan about	1400 mm
Length about	1000 mm
Wing area about	32 dm²
Tailplane area about	6 dm²
Total surface area about	38 dm²
Total wing load about	36 g/dm²
Flying weight about	1400 g*

* without float set, without auxiliary battery for position lights

Environmental protection notices

The symbol on this product, its operating instructions or packaging gives notice that this product may not be discarded as common household waste at the end of its service life. It must be turned over to a recycling collection point for electric and electronic apparatus.

The materials can be recycled according to their markings. You make an important contribution to protection of the environment by utilizing facilities for reuse, material recycling or other means of exploiting obsolete equipment.

Batteries must be removed from the unit and disposed of separately at an appropriate collection point.

Please inquire with local authorities about the responsible waste collection locations.

Safety notices

Liability insurance which is in force is required to operate model aircraft. This is required by legal statute. The entire operating/assembly instructions must be carefully read before attempting to put the model into operation for the first time. You are solely responsible for the safe operation of your RC model aircraft. Youths who perform assembly and/or operate the model must be responsibly supervised by an adult who is familiar with the circumstances and potential hazards involved with RC model aircraft.

From a legal point of view, a model aircraft is an aircraft and, as such, subject to respective laws that must absolutely be observed. The pamphlet »Model aviation law"«, order no. 8034.02, presents a summary of these laws. This pamphlet can also be reviewed at dealerships. Furthermore, compliance with the telecommunications regulations for remote control systems is required. Appropriate notices can be found in the operating instructions for your remote control system.

Only those parts included in the kit as well as those original Graupner accessories and replacement parts which we expressly recommend may be used. If a component in the drive unit is changed, safe operation is no longer warranted and all rights under the guarantee are voided.

Avoid short circuit conditions and reverse polarity.
The high energy level of batteries present explosion and fire hazards.

A RC aircraft model can only be functional and meet expectations when it has been carefully built according to the assembly instructions. Only cautious, considered handling during operation of the model will prevent personal injuries and property damage. No one would get into a glider and – without any advance training – attempt to fly it. Successful model flying also necessitates a training and practice phase.
However, the manufacturer has no possibility to influence the assembly and operation of a RC aircraft model. This is why emphatic notification is herewith made about the hazards, and all liability for these is expressly rejected.

Please address these issues with an experienced model pilot, a club or a model aircraft school. We also refer you to dealerships and relevant trade publications. The optimal situation is to fly from an approved model airfield as a club member.
Adhesives contain substances which, under some circumstances, can be harmful. It is therefore imperative that the manufacturer's respective notices and warnings are observed.

The operator must be in full possession of complete physical and mental facilities. As with driving an automobile, operating a model aircraft under the influence of alcohol or drugs is not allowed.

Inform those persons passing by or watching about the hazards associated with your model before you start it and admonish these persons to maintain a safe distance.

Always keep the necessary safe distance between the flying model and persons or obstacles; never fly over or toward other persons!
Model flying activity may only be pursued when outdoor temperatures are between - 5 ℃ and + 35 ℃.
Extreme temperatures can lead to changes in battery capacity, affect material characteristics and even, for example, cause adhesive bonds to become defective.
Every model pilot is to behave such that public safety (in particular other persons and property) and model flying activities in the area are neither endangered nor disturbed.
Never fly the model aircraft in the vicinity of high-voltage transmission lines, industrial premises, residential areas, public streets, school yards or playgrounds and the like.

Pre-start checks

Perform checks for correct functionality before every use. Switch on the transmitter and receiver for this. Pull out the transmitter antenna, check all control surfaces to be in their neutral positions, that they function flawlessly and that their direction of throw is correct. Repeat these checks again when the motor is running and a helper holds the model securely in place.

If you are a novice to model flying, it is advantageous to have an experienced helper at your side during the checks and the first few flights.

Warnings must absolutely be observed. They point out situations and activities which, if disregarded, can lead to severe injuries – in extreme cases even to lethal injuries or permanent disabilities.

Motor-driven propellers present a constant injury hazard. They may never come into contact with any body part! A rapidly turning aircraft propeller can, for example, sever a finger!

Never place yourself in or in-front-of the plane of a turning aircraft propeller! A part of the propeller or the entire propeller could break loose and be hurled away at great speed and energy to hit you or others. This can lead to severe injuries. Be careful that no foreign object comes into contact with a turning propeller!

A blockage of the propeller by any kind of part must be precluded.

Therefore, check the model and all of its attached parts (e.g. propellers, RC parts, etc.) for secure seating and possible damage before every use. The model may only be put into operation after all defects have been corrected.

Check that the transmitter frequency to be used is free. Only then can the transmitter be switched on! Radio frequency interference caused by unknown sources can occur anytime without warning! The model is then out of control and unpredictable! Do not leave the remote control system unattended, this prevents unauthorized third-parties from handling the system.

Switch on the electric motor only when nothing is in the turning area of the propeller. Never try to stop a running propeller. Only operate the propeller with the motor when both are installed in the model.

The model's flying attitude must always be explicitly recognizable during the entire flight in order to ensure secure control and maneuvers. If functional impairments or disturbances become evident during a flight, a landing must be initiated immediately for reasons of safety. You must always avoid other aircraft. The take-off/landing strip must be free of persons and other obstacles.

Always ensure the batteries are fully charged as otherwise the flawless operation of the RC system cannot be assured.
Never use batteries which have been overheated, become defective or are damaged. The battery manufacturer's usage instructions must always be followed.

Prior to every flight, check the entire RC system as well as the model aircraft for full functionality and range.
In doing this, be sure to first put the transmitter control for the motor into its OFF position when the model is initially put into operation. Thereafter, switch on the transmitter first, followed by the receiver, in order to avoid an uncontrolled startup of the electric motor. In reverse order upon shutdown, be sure to switch off the receiver first and only then switch off the transmitter.
Check that the aircraft's control surfaces move in the directions they should with respect to movement of the joystick.

After use, take the battery out of the model and store it only in a discharged state, out of the reach of children, in an environment having a temperature of between about + 5 °C to + 25 °C.

These notices are intended to call attention to the diverse hazards that can arise from improper and irresponsible handling. Proper, conscientious model aircraft flight is a creative, enlightening, refreshing recreational activity.

Manufacturer declaration:
If there should be an evident material or processing defect in one of the objects marketed in the Federal Republic of Germany and purchased by a consumer (§ 13 BGB) we, the company Graupner GmbH & Co KG, D-73230 Kirchheim/Teck, accept responsibility for eliminating the object's defect within the scope as specified below.
The rights acquired through this manufacturer declaration cannot be asserted by the consumer when the object's usage impairment is due to natural wear, use under competitive conditions, improper usage (including improper installation), or external causes.
This manufacturer declaration leaves the legal or contractual provisions for defect claims and the consumer's rights in the purchase contract with respect to the seller (dealer) unaffected.

Scope of guarantee performance
In the event of a guarantee claim, we reserve the right to choose between a repair or the replacement of defective goods. Further reaching claims, in particular claims for compensation of costs in conjunction with the defect (e.g. assembly/disassembly costs) and remuneration for consequential damages – when legally permitted – are excluded. Claims based on legal regulations, in particular those associated with product liability law, are unaffected by this.

Prerequisite to guarantee performance
The purchaser must assert claim for guarantee performance in writing, which is to be accompanied by the original purchase receipt (e.g. invoice, receipt, delivery note) and this guarantee card. The purchaser must also return the defective goods to the above address at his/her own cost.
The purchaser is to state in the claim the nature of the material or processing defect or the defect's symptoms specifically enough that a review of our guarantee obligation is possible.
The transportation of the object from purchaser to us as well as return transportation is at the risk of the purchaser.

Period of validity
This declaration is only valid during the entitlement period for making claims as stipulated by this declaration. The entitlement period is 24 months from the item's date of purchase by the consumer from a dealer in the Federal Republic of Germany (purchase date). If claims are made for defects after expiration of the entitlement period or the defects in the claim are not substantiated as required by this declaration or documents are only submitted after expiration of the entitlement period, then the purchaser is not entitled to rights or claims under this declaration.

Limitation period
To the extent we do not acknowledge liability for a properly submitted claim as specified by this declaration within the entitlement period, all rights of this declaration have a 6 month period of limitation from the point in time of claim submission but not earlier than the end of the entitlement period.
Applicable law
This declaration and all claims, rights and obligations arising therefrom are governed exclusively by German substantive law without the norms of international private law and under exclusion of applicability for the UN Convention on the International Sales of Goods.